suspension

user manual 2007

www.magura.com

hugin

German Suspension Technology

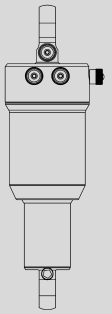
MAGURA®

the passion people

User Manual

Hugin 2007

the passion people



Deutsch

English

Francais

Nederlands

Italiano

Español

Content

1. Introduction
   1.1 MAGURA Hugin Rear Shock and it's applications
   1.2 Assembly
   1.3 Before every ride
   1.4 During the ride
   1.5 After a crash or accident
   1.6 Further references
2. Maintenance and warranty
   2.1 Maintenance
   2.2 Warranty
3. Glossary, Adjustment and Setup
   3.1 Preload
   3.2 Rebound damping
   3.3 Compression damping
   3.4 Albert Plus
4. Data
5. Short cut instruction

This user manual gives you detailed instructions on the set up of your rear shock. You can find more information on the web at: http://www.magura.com . If you still have questions, please place them in the forum at www.magura.com.
This user manual is part of the product. Do not hand over the product to third parties without this manual.
Pictures and descriptions may vary to the product being explained.
Technical details are subject to change with out prior notice.

Explanations

Danger:
This symbol means possible danger to your health and even life if you do not follow the instructions given, or if the necessary safety instructions are not followed.

Attention:
This symbol warns you of inappropriate handling that could lead to serious damage to the material and/or the environment.

Note Icon:
This symbol gives you additional information about the general handling of the product or indicates paragraphs in this manual, which have to be read carefully.

1 Introduction

Dear Customer,
congratulations! You have just become a member of the MAGURA mountain bike community. We believe that our products result in a higher ride quality and hope you will enjoy our products for many years to come. You now own a high end rear shock, that was designed and assembled in Germany. Please take the time to read this manual carefully, so you can become familiar with your new rear shock and find out how to get the best set-up for your own expectations.

RIDE HARD
The Passion People

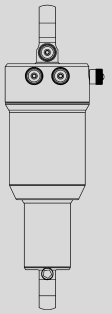
1.1 Hugin rear shock and its application

The high-end rear shock Hugin is designed for x-country, marathon, tour and enduro use. The lightweight and solid construction is made for maximum durability and easy service. The large air chamber volume allows low air pressure. The elastomer negative spring adjusts itself to the riders weight. All settings are easily adjusted without tools by the alloy knobs, you only need an air pump. The genius damping system Albert Plus offers a separate and independently adjustable pedal platform, which eliminates pedal induced bobbing on climbs. High and low speed compression damping can be adjusted separately. Standard ball-and-socket mounts reduce lateral forces on the rear shock to a minimum.

1.2 Assembly

If you are unsure about fitting the rear shock by your self onto your bike, please consult your local Magura dealer. He´s got the knowledge and specific tools for a proper assembly!
A badly fitted damper can cause accidents!

delivery content
- rear shock,
- pump,
- hardware,
- spacer,
- Reducer sleeve from D8 ➔ D6

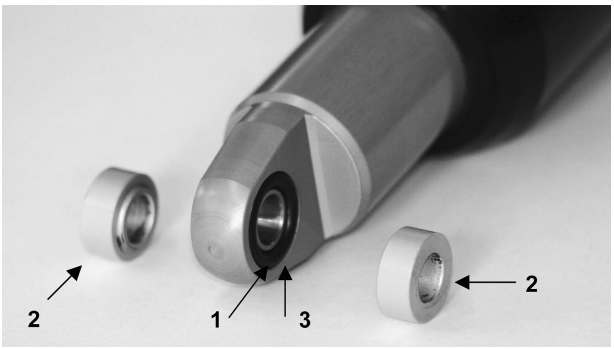


Accessories depend on the model. Spec changes, especially on small parts, are subject to change without prior notice !

If you assemble the rear shock by yourself, make sure it is compatible with your frame. Important is the shock length from eye to eye (versions available: 165mm/6,5“, 190mm/7,5“, 200mm/7,88“, 222mm/8,75“), width and diameter of mounting hardware. The rear shock must not collide with the frame, rockers or rear end, even fully compressed. To check this, release air from the rear shock while mounted to the frame and compress it completely. Check also, that the rear shock is assembled without play. The Hugin rear shock is designed for an optimum leverage ratio from 2 to 3. If in doubt ask your bike manufacturer for the leverage ratio.

If the rear shock is to be mounted vertically, the side with the adjustment knobs should be on the upper part, allowing the dirt to be wiped downwards off the piston.

MAGURA rear shocks are sold with ball-and-socket mounts.
To achieve different mounting widths and diameters please use the respective hardware with optional spacers. Assembly is as shown in the picture.



1 ball-and-socket mount
2 mounting hardware
3 O-rings

If you are unsure about fitting the rear shock by your self onto your bike, please consult your local MAGURA dealer. He´s got the knowledge and specific tools for a proper assembly!
A badly fitted damper can cause accidents!

1.3. Before every ride

Always wear a helmet.

Make sure the rear shock doesn´t have any mechanical external damages.

Make sure the mounting bolts are tightened with the correct torque (see the frame manufacturers manual). If they are not tightened correctly, they may become loose possibly resulting in an accident!

Check that you are using the correct air pressure. The rear shock should only be ridden with correct air pressure. Minimum air pressure is 5 bar/70psi. Maximum air pressure is 20 bar/295 psi.

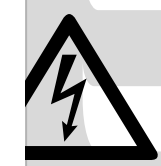
Look for eventual leakages on piston rod and valve. Loss of air and/or oil induces bad performance and can destroy the rear shock.

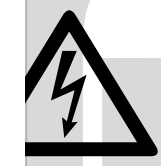
1.4 During the ride

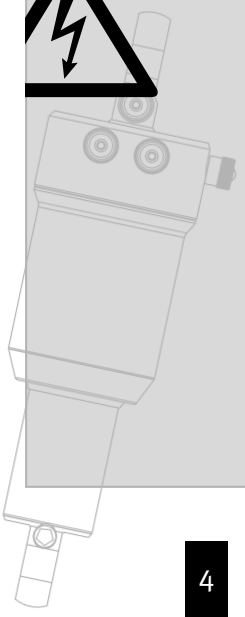
If you hear strange noises after hard impacts, that sound as if the rear shock is damaged, stop riding (further riding with this shock could result in serious injury). Bring/send the rear shock to an authorised dealer or to a MAGURA service centre.

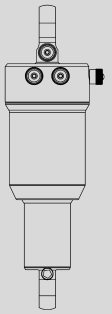
1.5 After crash or accident

Check the rear shock after a crash for any damage. The use of damaged or an incorrectly working rear shock could result in serious injury. Have your rear shock checked by an authorized dealer.









1.6 Further references

Please note that hard and out of control landings can cause severe damage to the rear shock with the consequence that it could endanger your health and/or life.

A incorrectly fitted rear shock in the frame could result in failure! Please ensure, (you or your dealer),that it is fitted correctly. Check that the fixing bolts are tightened to the correct torques, (see frame manual).

➔ If you have doubts about the safety of your rear shock please contact your dealer or ask one of MAGURA's Service team, (see the service centre for your country on the back of the manual.

The rear shocks of the Hugin range are intended for x-country, marathon-, tour- and enduro use. The manufacturer and dealer are not liable for any other use that surpasses these criteria or which does not respect the security guidelines stated in this manual.

Manufacturer and dealer are also not liable for any overloading of the bike and/or for any incorrect repair to the shock. Maximum system weight including bike, biker and luggage should not exceed 130kg/285lbs. Maximum air pressure is 20 bar/295 psi.

2 Maintenance and Warranty

2.1 Maintenance

We recommend cleaning your rear shock on a regular basis. Use water, mild soap and a brush. Do not use degreaser or abrasive cleaners. Do not use a power washer, as water may be forced through the seals, destroying them, the internals and piston rods.

The rear shock Hugin features an oil damping system and grease lubrication on the air side and thus requires little maintenance. They therefore only need to be serviced once a year. Racers and those who are permanently out riding, should consider that their components get more wear and tear and need servicing more often.

PLEASE NOTE!, MAGURA rear shocks must not be disassembled. This work must only be carried out by MAGURA Service centres or at MAGURA Germany, this is among other things due to the high internal pressure.
Never open the screws, because the screws themselves and/or oil and/or gas can be shot out of the rear shock, possibly causing severe injuries!
Disassembly can only be done by MAGURA Service Centres or MAGURA itself. The internal structure requires special tools and special filling machines. Already small amounts of air can cause malfunctioning of the rear shock.

2.2 Warranty

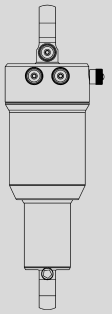
Parts, components and assemblies that are subject to normal wear and tear are not covered under this warranty .

The warranty is no longer valid if the rear shock is used in any way out with the terms stated in this manual. This also applies to inappropriate set up, maintenance and service as explained in this manual.

Like every other product, this rear shock also contains parts that will wear during normal use. The life span of these parts depends on the type and frequency of use, as well as care and maintenance. Please note that the usual wear of parts is normal and therefore no reason for concern. This applies especially to: bushings, seals and the surface of the pistons and cylinders.

Warranty duration and laws may vary from state to state and/or country to country.

Please note that a warranty case can only be handled if accompanied by proof of purchase.



The warranty becomes null and void through:

- Abnormal strain, neglect, abuse and/or misuse
- Incorrect fitting to the frame
- Accident or collision damage
- Use of **not**-original MAGURA parts and lubrication products
- Changing the surface (for instance painting)
- Incorrect maintenance
- Transport damage or loss
- Exceeding the system weight of 130kg (286lb)

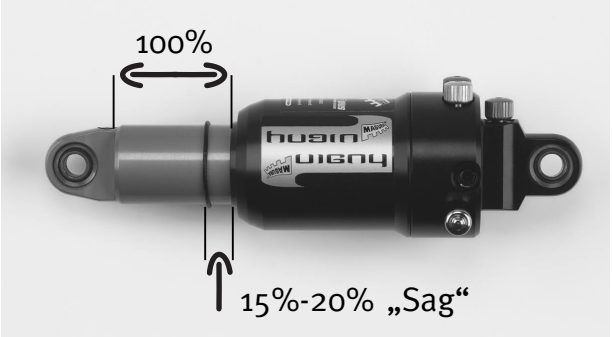
3 Setup and adjustments

After correctly fitting, you can start fine-tuning the settings of your rear shock. You can use the explanations with the following guidelines to get the perfect set up.

3.1 Preload

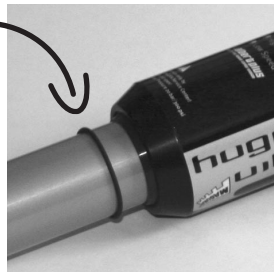
The preload is the initial force, with which a spring is compressed.

Adjustment of preload: Your rear shock should have a sag (sag= travel of the rear shock when sitting relaxed on your bike) of 15% to 20% of the total travel. Turn all damping knobs fully open ("-"). Reduce the air pressure, when sag is less, increase air pressure, when sag is more. You can check the sag area on the short cut instructions gage in the middle of this manual. You'll find an o-ring on the piston of the rear shock, which is for sag indication (see also picture).



1. The rear shock comes delivered with 8 bar/115psi air pressure (max air pressure: 20 bar/285 psi).

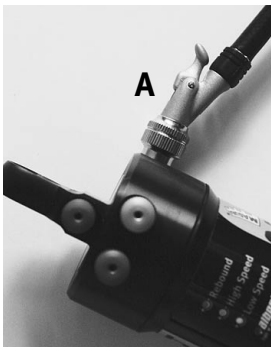
o-ring for „Sag“-adjustment

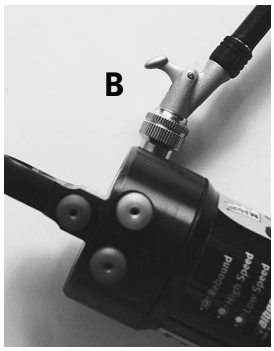


2. Unscrew the valve cap and screw the pump head onto the valve. With the MAGURA pump, screw the pump head on with the lever in position A, once screwed on, flip the lever to position B.
Tip: don´t screw the pump head too tight onto the valve, otherwise it will be difficult to flip the lever to position B.

3. Adjust air pressure for correct sag (15%-20% of total travel). Correct sag can be checked easily with the gage on the short cut instruction in the middle of this manual.

4. Pressing button C completely: air is released step by step.
Just touching lightly on button C: air is released completely.



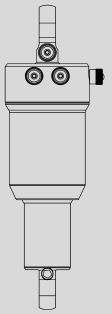


Max air pressure: 20 bar/285 psi.

5. Before unscrewing the MAGURA pump head from the valve, flip the lever back to position A to avoid air loss.

6. Screw on the valve cap.

The adequate air pressure for your rear shock depends very much on the linkage geometry of your bike and the rider weight, therefore no standard pressure can be given.
A good starting pressure is 8 bar/ 115psi.

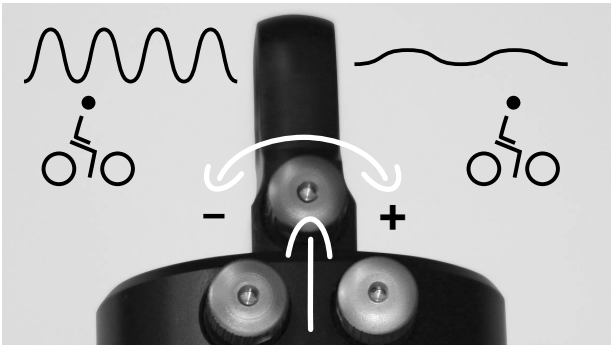


3.2 Rebound damping

The rebound damping controls the rebound speed of the rear shock. When the rebound speed is too low (high rebound damping) the wheel looses contact to the ground, resulting in loss of control and traction. At too low rebound damping (high rebound speed) the wheel starts bouncing, resulting also in loss of control.

Adjustment of rebound (red): The rear shock should not bounce uncontrolled nor compress after an obstacle. Best for adjusting the rebound damping is to roll down a small step (e.g. walk way) seated on your bike.

The rear shock should only bounce back 1 to 1,5 times. If it bounces back more, increase (“+”) rebound damping step by step. If it stays compressed, decrease (“-“) rebound damping.



Rebound knob (red)

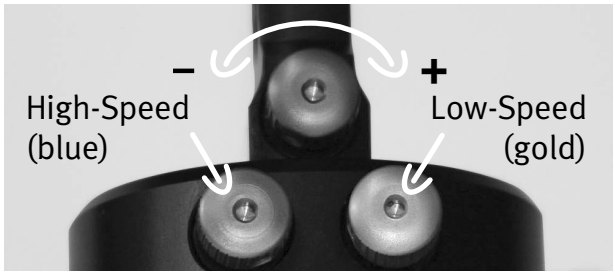
3.3 Compression damping

The compression damping controls the speed when compressing the rear shock. High compression damping increases the compression force, low compression damping reduces the compression force.

3.4 Albert Plus speed sensitive compression damping

Your Hugin rear shock is equipped with the unique Albert Plus damping system, for independent setting of high and low speed compression damping. Pedal platform is adjusted separately and individually from other settings with the low speed knob to eliminate pedal stroke induced bobbing.

Adjustment Low Speed compression damping (gold):
Starting from the open position (knob completely released), observe the movement of your rear shock while pedalling normally on even ground. Does it move a lot? Increase the low speed damping turning clockwise (“+”) step by step until movement is reduced. From this pedal platform setting you can increase the damping for even less movement or decrease it for more sensitivity.



Adjustment High Speed compression damping (blue):
Does the rear shock top out on hard impacts, even with correct sag (full travel with the o-ring pushed down from the piston)? Then increase high speed compression damping step by step with the blue knob until avoiding top out.

4 Data

Tightening torque on fixing bolts in frame: see owners manual of frame.
Max air pressure: 20 bar/295 psi

5 Short cut instruction:

1. Starting form 8 bar/115 psi adjust correct sag (15% to 20% of total travel) with gage, damping is all open („-„).
2. Adjust rebound (red), so it only bounces back 1 to 1,5 times.
3. Adjust low speed compression (gold): bobbing while pedalling: turn „+“ until bobbing is eliminated.
4. Adjust high speed compression (blue): Topping out even with correct sag? Turn blue knob (“+”).

user manual 2007

Kurzanleitung
Short cut instruction
Réglage rapide
Verkorte handleiding
Istruzioni Veloci
Instrucción breve

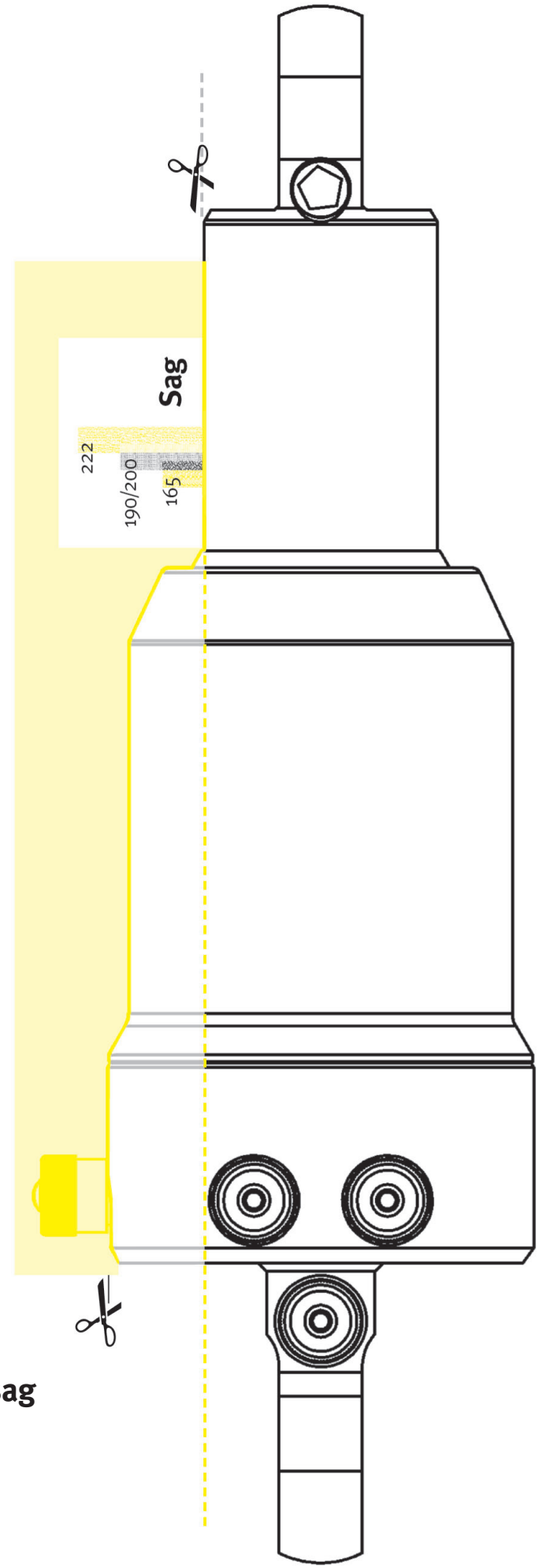
hugin

MAGURA®

the passion people

MAGURA

the passion people



Deutsch

Anlegen der Messlehre

English

Placement of the gage

Francais

Positionnement de la règle

Nederlands

plaatsing van de ring

Italiano

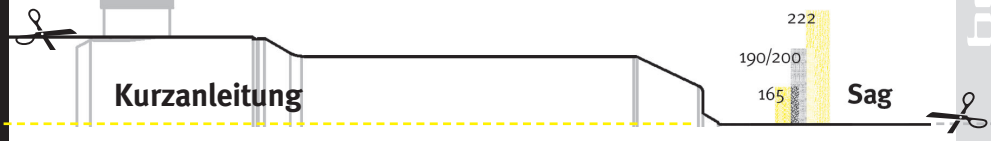
Calibro di Regolazione del sag

Español

Aplicación del comprobador

Deutsch

1. Beginnend mit 8 Bar den korrekten Sag einstellen (15%-20% des Gesamthubes) mit Lehre, dabei Dämpfung auf („-„)
2. Zugstufe einstellen, s. d. nur 1-1,5 mal Nachwippen
3. Druckstufe Low-Speed einstellen: Wippen bei pedalieren: „+“ drehen, bis wippen ausgeschaltet ist.
4. Druckstufe High-Speed einstellen: Trotz korrektem Sag schlägt der Dämpfer durch? Blau „+“ drehen



Kurzanleitung

English

1. Starting form 8 bar/115 psi adjust correct sag (15% to 20% of total travel) with gage, damping is all open („-„).
2. Adjust rebound (red), so it only bounces back 1 to 1,5 times.
3. Adjust low speed compression (gold): bobbing while pedalling:turn „+“ until bobbing is eliminated.
4. Adjust high speed compression (blue): Topping out even with correct sag? Turn blue knob (“+”).

Short cut instruction

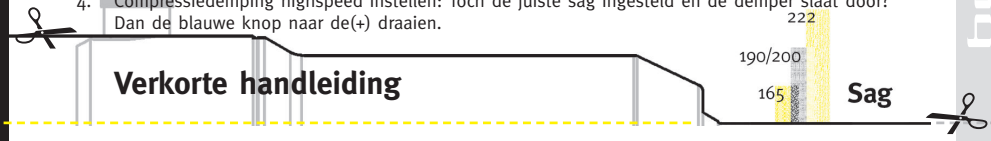
Francais

1. Commencez de régler le Sag (15-20% du débattement total) à partir d’une pression de 8 bars avec la règle, toutes molettes amortissement dévissées.
2. Réglez la détente, afin qu’elle n’oscille qu’1-1,5 fois après choc.
3. Réglez la compression lente: vissez la molette dorée, jusqu’à supprimer le pompage.
4. Réglez la compression rapide: l’amortisseur talonne malgré un Sag correct? vissez la molette bleue.

Réglage rapide

Nederlands

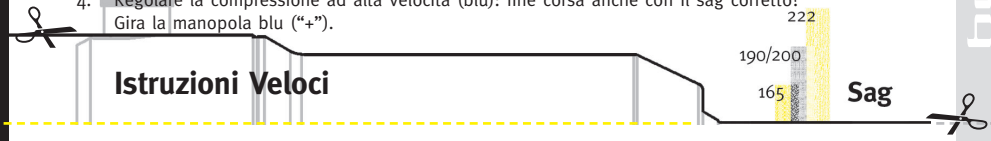
1. Begin met 8 bar om de juiste sag in te stellen (15%-20% van de totale veerweg) met de verstellingen open (naar de – gedraaid)
2. Rebound instellen, de demper mag maximaal 1 tot 1,5 maal na veren.
3. Compressiedemping lowspeed instellen: deinen bij pedaleren: naar de + draaien totdat het deinen opgeheven is.
4. Compressiedemping highspeed instellen: Toch de juiste sag ingesteld en de demper slaat door? Dan de blauwe knop naar de(+) draaien.



Verkorte handleiding

Italiano

1. Partire da 8 bar/115 psi ed aggiustare il sag (15 / 20% dell’escursione totale) con regolazioni completamente aperte.
2. Regolare il ritorno (rosso) in modo che rimbalzi una volta – una volta e mezza.
3. Regolare la compressione a bassa velocità (oro) in modo da eliminare l’oscillazione dovuta alla pedalata: girare “+” fino a quando l’oscillazione è eliminata.
4. Regolare la compressione ad alta velocità (blu): fine corsa anche con il sag corretto? Gira la manopola blu (“+”).



Istruzioni Veloci

Español

1. Ajustar el Sag correcto con el comprobador, empezando con 8 bar (15%- 20% del recorrido total), la amortiguación abierta („-„).
2. Ajustar rebote, para que sólo oscile 1 a 1,5 veces.
3. Ajustar compresión de velocidad baja (oro): Balanceo al pedalear? Girar „+“ hasta eliminar balanceo.
4. Ajustar compresión de velocidad alta (azul): Hace tope con el Sag correctamente ajustado? Girar el dial azul en “+”.

Instrucción breve

MAGURA Bike Parts
GmbH & Co.

Heinrich Kahn Straße 24
D-89150 Laichingen
info@magura-bikeparts.de

www.magura.com

Hotline | Helpdesk:
phone 09001-648124
(41 ct. per minute)
daily from 9 to 12 h
and 12.30 to 15.15 h
fax +49-7333-962651
service@magura.de

MAGURA Partners and Service Centers Worldwide

Andorra
Esports Jorma
phone 376-844133
fax 376-843022
jorma@correu.andornet.ad

Australia
TMO Sports
phone 02-9695-7744
fax 02-9695-7844
service@velovita.com.au

Austria
MAGURA Austria
phone +49-7333-962613
fax +49-7333-962617
m.haas@magura.de

Belgium
Transmission
phone 010-244646
fax 010-244777
info@transmission.be

Canada
MAGURA USA
phone 618-3952200
fax 618-3954711
magura@magurausa.com

Denmark
Borandia APS
phone 47-107172
fax 47-107066
borandia@borandia.dk

Finland
Best Brakes Ky
phone 050-591 5863
fax 019-388485
info@bestbrakes.inet.fi

France
MAGURA Service
Center France
phone +49-7333-962643
fax 04-98106289
sav_france@magura.de

Great Britain
MAGURA Bike Parts UK Ltd.
phone 01530-837195
fax 01530-811286
service_uk@magura.de

Greece
Nikos Maniatopoulos
phone 2610-993 045
fax 2610-990 424
amarket@idealbikes.gr

Hong Kong
MAGURA ASIA Inc.
phone +886-4-23283739
fax +886-4-23283734
service@magura.com.tw

Hungary
Mali Bicycle Technology
phone 01-4207563
fax 01-4205321
mali@mali.hu

Ireland
Beara Bike Trading
phone 064-89134
fax 064-41334
wschmidt@indigo.ie

Italy
Areab
phone 0438-435550
fax 0438-439847
info@areab.it

Japan
MC International
phone 06-6536-0901
fax 06-6536-0907
mcinter@mx1.alpha-web.ne.jp

Korea
MAGURA ASIA Inc.
phone +886-4-23283739
fax +886-4-23283734
service@magura.com.tw

Luxemburg
MAGURA Service
Center France
phone +49-7333-962643
fax +33-4-98106289
sav_france@magura.de

Netherlands
MAGURA Nederlands
phone +49-7333-962614
fax +49-7333-962617
c.uhl@magura.de

Norway
Botolfsen
phone 022-630610
fax 022-970662
info@botolfsen.no

Portugal
LPL-Artigos Desportivos
phone 021-4835354
fax 021-4835362
lpl@netcabo.pt

Singapore
MAGURA ASIA Inc.
phone +886-4-23283739
fax +886-4-23283734
service@magura.com.tw

South Africa
Cycles Africa
phone 011-678-1548
fax 011-678-1548
cunning@mweb.co.za

Spain
- SAT MAGURA: Bicisport
Sólo para reparaciones y servicio!
phone 93-3404480
fax 93-3404480
- Bicicletas Monty
phone 93-6667111
fax 93-6667112
monty@monty.es
- Casa Masferrer
phone 93-8463444
fax 93-8465355
cmcenter@casamasferrer.com
- Comet
phone 943-331393
fax 943-551407
comet@comet.es
- Representaciones Spinola & Perez
phone 619-702946
fax 93-2317731
c.perez@spinolaperez.com

Sweden
Jaguarverken AB
phone 060-669800
fax 060-669809
info@jaguarverken.se

Switzerland
- Intercycle
phone 041-9266511
fax 041-9266355
info@intercycle.com
- Amsler & Co.
phone 052-6473636
fax 052-6473637
info@amsler.ch

Taiwan
MAGURA ASIA Inc.
phone 04-23283739
fax 04-23283734
service@magura.com.tw

USA
MAGURA USA
phone 6183952200
fax 6183954711
magura@magurausa.com
www.magurausa.com

© MAGURA 2006
All rights reserved
Printed in Germany
0689 646, 07.2006

Cover: Apollo 11 | Inhalt: lines & points

MAGURA®

the passion people